DAVID AGYEI

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Education

University of Chicago   **Graduating June 2027**
Computer Science & Applied Mathematics   *Chicago, Illinois, USA*

Relevant Coursework

- Intro to Computer Science
- Object-Oriented Programming
- Systems Programming
- Machine Learning
- Abstract Linear Algebra

Technical Skills

Languages: Python, Java, JavaScript, C, SQL, HTML, CSS
Frameworks / Tools: AWS (Lambda, APIGW, S3, Step Fn, CloudWatch, Secrets Mgr) , Docker, Git/GitHub Actions, Supabase, Firebase (Auth/Firestore), PostgreSQL, pandas/NumPy, Airflow, Flask/Streamlit, Plotly, Chrome Ext APIs
Technical Domains: Serverless cloud architecture & (CI/CD), API & micro-services, data engineering & analytics, real-time dashboards & visualization, security & audit logging, algorithmic trading, Machine Learning.

Experience

Play Smart Literacy   **June 2024 – August 2024**
Software Engineering Intern   *Remote*

- Built a serverless Python pipeline (AWS Lambda | API Gateway | S3) that syncs ≈800 Slack uploads/day to Google Drive, saving 4 hrs/wk of content-manager effort and sustaining 99.9% accuracy.
- Secured & instrumented the stack with OAuth 2.0 scopes, AWS Secrets Manager, and CloudWatch custom metrics, cutting mean time-to-detect sync failures from 15 min to 90 s.
- Provisioned ~15 resources in Terraform and wired GitHub Actions CI/CD for dev–stage–prod, eliminating manual console changes.

UChicago Housing & Residence Life   **June 2024 – Present**
Student Administrative Assistant/Software Developer   *Chicago, IL*

- Built a Python micro-service that ingests 2 000 + housing requests, enforces occupancy rules, and pushes normalized sheets to SharePoint in under 60 s (–50% runtime, –30% validation errors).
- Added a plug-in data-quality layer for schema checks, deduping, and conditional-formatting alerts, surfacing conflicts with 97% precision and eliminating manual cross-workbook reconciliation.
- Deployed a Streamlit dashboard that streams live occupancy + wait-list metrics from the API; daily use cut planning-meeting time 30% and raised coordinator satisfaction to 95%.

Projects

Timely Tab | *JavaScript, HTML5, CSS, Firebase, Mistral API*   **timelytab.net**

- Launched multi-mode typing game on the Chrome Web Store; reached 15 + active installs with a 6 min avg. session.
- Synced scores across devices via Firebase Auth + Firestore leaderboards, delivering <2 s login and zero lost records in 250 + cumulative games.

Key Management System | *Python, JavaScript, Flask, Supabase, Pytest*   **Demo**

- Web app tracking 3 000 + keys; cut manual spreadsheet logs 90% and added real-time audit trails.
- Layered backend (service → repository → domain) batches updates in <200 ms and auto-migrates legacy sheets.
- Implemented end-to-end logs + Chart.js dashboard; slashed incident root-cause analysis time 4×.

Trading Pattern Detection App | *Python, Streamlit, NumPy, Pandas*   **streamlit.app**

- Streamlit web app that scans OHLC time-series and detects Head-&-Shoulders, Double Top/Bottom, and Wedge patterns via matrix-profile motifs + extrema clustering.
- Strategy-pattern OOP lets new detectors plug in with <50 LOC; CLI grid-search auto-tunes hyper-params.
- Boosted back-test precision from 68% → 87% on 1 M + historical bars by auto-tuning and Plotly QA.

Leadership / Extracurricular

National Society of Black Engineers—Member   **Spring 2024 – Present**